To the Graduate Council:

I am submitting herewith a thesis written by Elizabeth Ann Bailey entitled "A Field Experience in Public Health Nutrition with the Nutrition Section of the Florida Division of Health." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Nutrition.

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A FIELD EXPERIENCE IN PUBLIC HEALTH NUTRITION WITH THE NUTRITION SECTION OF THE FLORIDA DIVISION OF HEALTH

A Thesis

Presented for the

Master of Science

Degree

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Elizabeth Ann Bailey

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ABSTRACT

The field course described in this thesis was completed between September 23 and November 8 in 1974 while with the Nutrition Section of the Florida Division of Health. The purpose of this field course was to integrate academic theory and practical application in the field of public health nutrition. In addition, the field course was to provide an opportunity for developing methodology in disseminating nutritional concepts to the general public in a most practical manner.

The field experience was designed to allow the author to familiarize herself with the philosophy and principles of public health. Through observation and participation in the nutrition program, both at the state and local level, the author was able to develop her professional skills in public health nutrition.

Through the opportunity given by the field course, the author grew in self-confidence and was strengthened in her personal abilities to perform and initiate the responsibilities of a future public health nutritionist.

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INTRODUCTION

Nutrition is an emerging art and science which integrates a broad spectrum of disciplines into the health care system, ranging from biochemistry and medicine to statistics, anthropology, and epidemiology. Several decades ago man witnessed in rapid sequence the discovery of vitamins, minerals, and amino acids in relation to their role in human health and disease (1). Such scientific knowledge is useful to the general public only if translated into a form of understanding which can prove to be beneficial in practical application. Thus, a major role of the public health nutritionist is continuing education--a tool she must utilize in order to best accomplish the needs within the community she serves.

As a means of understudying the public health nutritionist in actual community practice, a field course is planned for public health nutrition students for application at the graduate level. This course--the integration of theory and practice--is a joint venture between the educational institution and the field agency at which the student chooses to study (2).

The field course described in this thesis was completed between September 23 and November 8 in 1974. The student chose the Florida Division of Health as the official health agency for her field course and was assigned to the south central portion of the state. The following objectives were chosen as guidelines to follow during the seven-week period:

1. To strengthen the student's philosophy and understanding of public health;
2. To observe how the Nutrition Section functions within an official health agency and how the services rendered relate to and are coordinated with other community agencies at state and local levels;
3. To study the physical, social, economic and political climate of the area and its population and to observe the role of the nutritionist in meeting the nutritional needs of the population;
4. To increase the student's initiative and self-confidence in her personal abilities through the direct and indirect application of nutrition principles and services;
5. To become competent in the technique of program planning and evaluation of public health nutrition projects as well as proficient in the use of tools and techniques for nutrition education;
6. To provide an opportunity for personal growth through self-appraisal of performance.

This thesis is organized into five chapters. The first chapter describes Florida's growth, economic development, and health status in relation to the nutritional needs of its people. The second chapter explains the organization and functions of the Division of Health. In the third chapter the Nutrition Section of the Division of Health is described including the various services offered by nutritionists within the state. The fourth chapter discusses the services provided by a

regional nutrition consultant as observed by the student with an explanation of the student's special project which was completed during the course experience. Finally, a summary and evaluation of the field course is found in Chapter V.

CHAPTER I

FLORIDA TODAY: ITS LAND, ITS PEOPLE, AND THEIR NEEDS

Florida, with its verdant landscape and subtropical climate, has attracted such an influx of people that today, ecologists are warning that population growth may eventually exhaust the state's resources. Florida today is synonymous with growth, but the benefits of rapidly increasing growth and economic development must be measured carefully against the even more rapidly rising costs of food and the increasing needs of the people in relation to nutrition and the maintenance of health (3). To encompass the needs of the people, the Nutrition Section of the Division of Health in Florida designs, initiates, and implements programs to demonstrate how nutritional problems can be identified and controlled in order to accomplish practical and sensible solutions.

Population growth is a major factor in considering the nutritional services to be initiated in a state. Florida's population in 1973 was 7,845,100--an increase of 5.4 percent over the previous year (4). Of that numerical increase, approximately 83 percent were new residents through immigration from other states and foreign countries (5). The nonwhite population dropped from 15.7 percent of the total population in 1970 to 14.8 percent in 1973 while the 65-and-over population rose to 16.2 percent of the total from that of the previous year percentage of 14.7 (4). Florida's per capita income in 1971 was $3,930 as compared to the United States figure of $4,156 (5).

Although there was a drop in the nonwhite population, Florida has an increasing number of seasonal farm workers estimated at 100,000. Approximately two-thirds of this migrant population is black with the remaining one-third consisting of Puerto Ricans, Texas-Americans and whites (6). Because the financial stability of migrants relies upon the agricultural cycles of the year, nutritional problems coexist in relation to inadequate income and health care systems. Nutritional problems frequently associated with the seasonal farm worker are iron deficiency anemia, growth retardation, and obesity. Consequently, it is important that nutrition surveillance be incorporated into ongoing public health and school health programs to assure adequate health maintenance for these inhabitants (6).

Florida's population profile also shows the influence of her long-standing image as a haven for retirees (3). While an increasing number of elderly reside in Florida each year, new problems arise concerning adequate health care for this age group. As seen in Table 1, seven of the ten leading causes of death in 1973 were to varying degrees, chronic diseases or diseases associated with aging (4). Consequently, the recognition of the specific nature of health requirements of the aging has indicated the need for innovative techniques and new efforts in implementing health services within the state (7).

Of continuous interest is that population which has reached the childbearing age. When biologically immature teenage girls become pregnant, their nutritional requirements are further increased due to the additional needs of the fetus. As a result, the fetus receives

TABLE 1

TEN LEADING CAUSES OF RESIDENT DEATHS AND DEATH RATES PER 100,000 POPULATION, BY RACE, FLORIDA, 1973 AND 1963

1973 Rank	Cause of Death	1973			1963		
		Total	White	Nonwhite	Total	White	Nonwhite
1	Diseases of the Heart	408.5	434.8	256.7	358.3	381.6	245.9
2	Malignant Neoplasms	211.4	222.6	146.5	169.8	179.0	125.9
3	Cerebrovascular Disease	129.5	132.5	112.0	113.2	110.2	127.2
4	All Accidents	64.1	60.8	83.1	59.9	56.4	76.6
5	Influenza-Pneumonia	29.4	28.3	35.7	33.6	27.5	62.9
6	Cirrhosis of Liver	21.7	21.5	22.6	11.1	12.1	6.2
7	Bronchitis-Emphysema	20.8	22.8	9.1	18.1	19.4	11.7
8	Diabetes Mellitus	19.6	18.1	28.4	15.6	14.1	22.5
9	Suicide	16.5	18.5	5.0	13.3	15.4	3.0
10	Homicide	16.1	8.5	59.5	9.3	4.2	33.9

Source: Division of Health 1973 Florida Vital Statistics. Department of Health and Rehabilitative Services, Jacksonville, Florida.

nutrients from a mother who is still growing and is in need of the same nutrients herself. Consequently, the poor nutritional status of teenage mothers may cause an increased number of low birthweight infants (infants weighing less than 5 1/2 pounds) and an increase in infant mortality (8). Of 107,726 resident infants born in 1973, 8.2 percent weighed less than 5 1/2 pounds, and although Florida's infant mortality rates are at a general decline, they still remain 5 percent above those of the nation (4). Therefore, the increased need for nutrition education and general health maintenance for mothers and infants (particularly teenage mothers) should be a major concern for those in the health professions.

In summary, Florida's varied health problems, in comparison with its rapid population growth, must be continuously studied to insure maximum health maintenance. It is the responsibility of health agencies within the state to provide such optimum health services to its people. With the increasing occurrence of obesity, diabetes, heart disease, and other nutrition related disease, diet counseling must become an integral part of the health care delivery system (8). Therefore, to insure comprehensive health service for all peoples in Florida, programs must be planned to meet the specific curative and preventive health needs of each community.

CHAPTER II

FLORIDA DIVISION OF HEALTH

The first public health agency in Florida was established in 1888 in order to combat a yellow fever epidemic in the Jacksonville area. Dr. J. Y. Porter served as Florida's first health officer with the initial program being that of a system for maritime quarantine (9). Through continual change and improvement, the present day organization of public health has been established.

As shown in Figure 1, the Division of Health is one of ten divisions of the Department of Health and Rehabilitative Services. The Department is administered by the Secretary of Health and Rehabilitative Services who is appointed by the Governor of the State of Florida (10).

The Division of Health consists of 13 bureaus and 67 county health departments with five sections which are appointed and directly supervised by the Division Director (Fig. 2). The bureaus are established by legislative authority (11). The Division functions to maintain and improve the health status of Florida's residents by furnishing continuous health services maintained by health professionals working to aid the population as efficiently as possible (12).

I. SECTIONS

The following sections are administratively separate from the thirteen bureaus with immediate supervision by the Director.

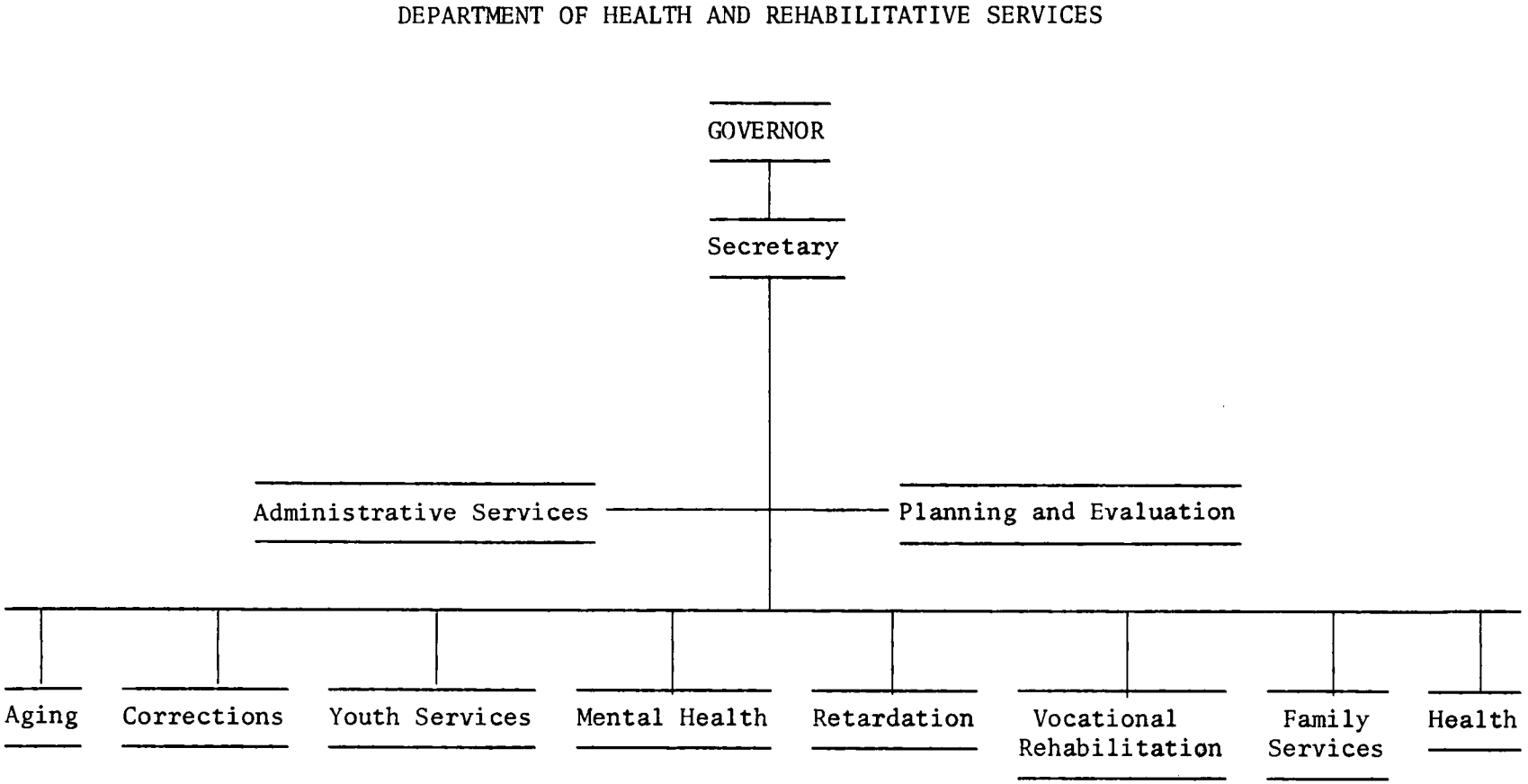

Figure 1. The administrative structure of the Department of Health and Rehabilitative Services of the State of Florida.

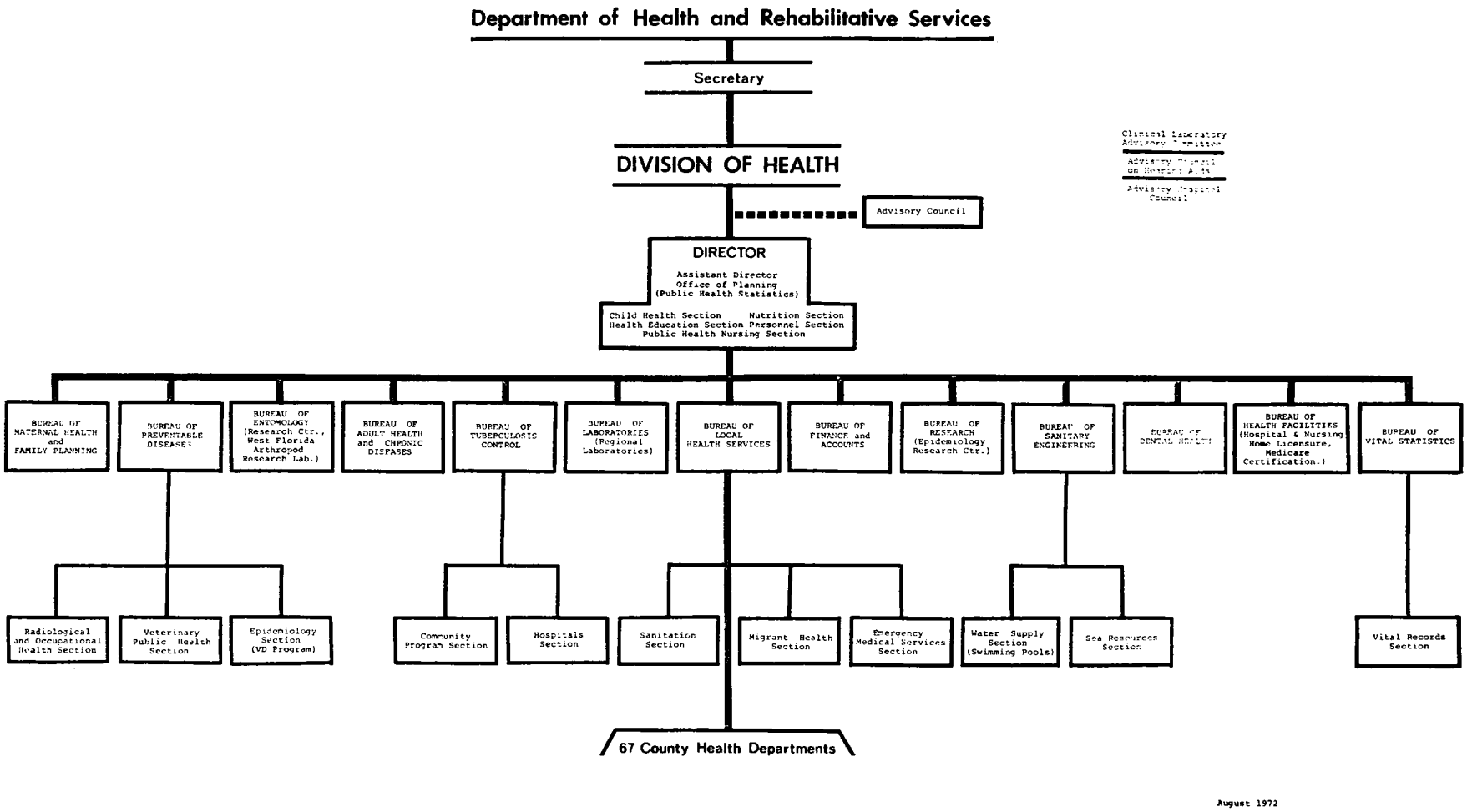

Figure 2. The administrative structure of the Division of Health.

Public Health Statistics Section

The primary function of the Public Health Statistics Section is to compile, summarize, statistically interpret, and present data obtained from records placed on file with the Bureau of Vital Statistics (11). The section determines significant trends in births, deaths, marriages, and divorces. This information is often used to indicate areas of public health need as well as measure the progress and effectiveness of existing public health programs. The section publishes current information in the "Monthly Statistical Report," and in an annual publication Florida Vital Statistics. Consultation for all Division bureaus and sections and all county health units is also provided. The section often assists in research projects in relation to formation of plans, sample and questionnaire design, systems of data collection, analysis, and presentation (13).

Child Health Section

The Child Health Section directs programs to preserve and improve the health of individuals from birth through adolescence, both by social and medical services. These programs consist of screening for PKU and other hereditary diseases including sickle cell anemia and congenital malformation. Medicaid screening is used in the detection of anemia, dental caries, incomplete immunizations, obesity, intestinal parasites, poor vision and hearing, and abnormalities of motor skill development. In cooperation with school health and county health units, early detection of hearing and vision losses is possible through the Hearing and Vision Conservation Programs. The section also administers Infant

Care Project grants with Florida's five Maternal and Infant Care Projects funded through the Division of Health and the two Children and Youth Projects, one funded through the Division of Health and the other through the University of Miami. Mental retardation identification and multidisciplinary guidance for retarded children is provided through the Dade Developmental Evaluation Clinic and the Tampa Diagnostic and Evaluation Clinic. The Child Health Section works directly with state nutritionists in the development, implementation, and evaluation of many child health services (14).

Health Education Section

The Health Education Section maintains close liaison with health educators and personnel of other bureaus, sections, and county health departments to implement the health education aspects of their various programs (11). The section consists of four Health Educator Consultants and staff members who promote the development of workshops, institutes, conferences, and creative services for exhibits or special education programs. The section also maintains a large medical library for public health personnel as well as other professionals and lay persons. Circulation of audiovisual materials and teaching aids including pamphlets, films, slides, and filmstrips is a function of this section as well as providing photographic services and consultation to other sections and bureaus within the Division (14).

Public Health Nursing Section

The Public Health Nursing Section administers a statewide public health nursing program, giving guidance and leadership to over 1,200

public health nurses in the 67 county health departments, and in independent visiting nurse associations and certified home health agencies (11). Central office staff and eight regional public health nursing consultants maintain both educational and administrative responsibilities. Orientation programs for nurses new to public health, monthly inservice programs, workshops and institutes, as well as observation and field experiences for graduate student nurses are planned and coordinated (15). The services provided by the public health nurses are varied. Team nursing, nurses assigned to special programs, nurse specialists, and program supervisors are new concepts which were initiated in 1973 (16). Areas of nursing activities include infant and child health; school health; maternity, midwifery and family planning; and home health services. In conjunction with these services, nutrition consultants work diligently with nursing staff through inservice programs, consultation and demonstration of techniques in order that nutrition counseling may be provided by the nurse in the absence of a nutritionist.

II. BUREAUS

Bureau of Local Health Services

The Bureau of Local Health Services coordinates all public health programs in the various county health units with those being planned or promoted by bureaus and sections of the Division of Health. It works in conjunction with each county health department concerning personnel and budget control, transmission and interpretation of Division of Health policies to local staffs, and assistance in the training of local

and state personnel (11). The bureau maintains records of all county health department major transactions and regularly evaluates operations as to improvements or expanded services needed (18). The bureau also contains three sections and two programs. The Sanitation Section and Migrant Health Section are a part of this bureau.

The Sanitation Section provides consultation services to county health units, provides basic and advanced training courses for county health department sanitarians, and coordinates sanitation programs of other public health activities such as the food hygiene program offered to food service personnel. The section also enforces regulations in relation to registration, product safety, drug control, and bedding inspection programs. The sanitarians issue permits to trailer parks, water bottling plants, migrant camps, and food processing and rendering plants. They inspect and test water supplies, swimming pools, and garbage disposal areas as well as control sanitation within dairies, schools, nursing homes, hospitals, and over 33,000 food service establishments within the state (17). The section works closely with the Bureau of Health Facilities and county health department staff including nutrition personnel in the certification and licensing of hospital and nursing homes (16).

A comprehensive health care program for migrant workers and their families is administered by the Migrant Health Section. There are ten projects within the state funded by the United States Public Health Service and four more independently supported by private funding. The projects provide medical, dental, nutrition, health education, and nursing services to more than 100,000 migrants. The clinics are

located in counties which are heavily populated by the migrant population with greatest usage during the months November through May because of the agricultural fluctuation (19). Regional as well as local nutritionists hired by the project work in coordination with the Migrant Health Project Coordinator in planning and implementing services rendered to the migrants (20).

Bureau of Adult Health and Chronic Diseases

The Bureau of Adult Health and Chronic Diseases directs programs in the field of chronic disease, problems of aging, and tobacco abuse, with the principal objectives to include promotion of public knowledge and an awareness of problems of chronic disease (16). The bureau has four sections: Adult Health, Cardiovascular Disease, Chronic Disease, and Kidney Disease.

The Adult Health Section provides medical services through programs for the aging, early detection of chronic disease, glaucoma screening, and consumer education in connection with hearing aid distribution and hazardous smoking.

The Cardiovascular Section organizes, operates, and supports cardiovascular screening programs and provides physical rehabilitation by therapists on a consultant basis through county health departments.

The Chronic Disease Section provides services in the area of cancer, diabetes, arthritis, epilepsy, and chronic respiratory diseases (21). The Diabetes Program provides insulin distribution for indigent diabetics, casefinding programs, and a monthly bulletin, "Timely Topics," for interested persons with diabetes (22). The Cancer Control Program

supports tumor programs statewide, providing consultant services, and the development of funding of cervical cytology programs (23).

The Kidney Disease Section conducts screening programs for early detection of kidney disease and for care and assistance to persons suffering from chronic renal diseases including dialysis treatment and kidney transplants (21).

The Nutrition Section works closely with the bureau in areas of diet related disease by providing therapeutic diet and/or general nutrition counseling for the patients in addition to monthly contributions to "Timely Topics." The bureau emphasizes health education seminars and workshops for professional health personnel and develops audiovisual materials, pamphlets, and leaflets for health education (21).

Bureau of Dental Health

The Bureau of Dental Health provides dental services in 36 county health departments by serving the indigent population as well as those people in counties without dentists. Activities in prevention include promotion of: controlled fluoridation of public water supplies, school fluoride mouthrinse programs, topical application of fluorides by professionals and dental health education in terms of programs of plaque control and supervised tooth brushing. The bureau's research program determines the effectiveness of present methods and programs for preventing and controlling dental disease. Currently, the bureau was awarded monies from the National Institute of Dental Research to carry out a field trial in testing an amine fluoride mouthrinse. In conjunction, consultation services are made available to all counties

routinely as well as the TB state hospitals on a regular schedule basis (21). Nutritionists aid in diet counseling, in providing inservice training to dental hygienists and field experiences for students associated with the bureau.

Bureau of Health Facilities

The Bureau of Health Facilities are responsible for licensing and certification of hospitals, nursing homes, homes for the aged, and homes for special services (25). Under contract with the Social Security Administration and Department of Health, Education, and Welfare, the bureau establishes certification of health care providers to participate in the Medicare programs (23). Under the Division of Family Services similar certification requirements are established in regard to the Medicade programs. Teams consisting of a hospital consultant, nursing consultant, and an institutional nutrition consultant participate in annual surveys for certification and licensing (27). Sanitarians from local health departments and local county nutrition consultants work closely with the survey nutrition consultant (18). Facility certification also includes the evaluation of Health Maintenance Organizations being established within the state. The bureau has the responsibility to evaluate the capabilities of the applicant to provide the comprehensive health care as authorized by the Florida Statutes. Ongoing educational activities include workshops of continuing education for dietitians, dietary employees, and dietary assistants as well as planning sessions and seminars in conjunction with the Florida Nursing Home Association. Bureau staff conduct inservice educational programs on a regular monthly basis (28).

Bureau of Maternal Health and Family Planning

The Bureau of Maternal Health and Family Planning conducts a variety of programs to promote, assist, and consult with county health departments to improve the health of mothers (11). These programs include prenatal clinics, mothers' classes, and postpartum care of the medically indigent; midwife supervision in cooperation with the Public Health Nursing Section; and family planning clinics. The bureau sponsors five Maternity and Infant Care Projects in the state serving 17 counties. Through federal funding, medical services are offered five days a week in these clinics which provide a nutritionist, physician, health educator, and social worker as consultants. There are ten individual Family Planning Projects within the state. Nutrition services through dietary counseling and inservice education are provided at these projects as well as by all health department clinics associated with maternal health and family planning. At the state level, a nutrition consultant acts as a liaison between this bureau and the Nutrition Section in order to provide consultative services to personnel associated with both areas (29).

CHAPTER III

NUTRITION SECTION OF THE DIVISION OF HEALTH

The first nutrition program in the state of Florida was initiated in 1914 under the first state health officer, Dr. J. Y. Porter. In order to eliminate the increasing prevalence of pellegra, Dr. Porter instructed public health physicians and nurses to include dietary information in their conferences, talks, and personal contacts (9). Since that time, the nutrition program has expanded in the state of Florida to such a degree that involvement occurs at all county levels with funds being allocated from local, state, federal, and private sources in order to provide services to all Florida residents.

I. OBJECTIVES OF THE NUTRITION SECTION

The objectives of the Nutrition Section are as follows:

1. To promote understanding of the role of nutrition in health maintenance, health protection, disease prevention, and control by providing authoritative information on diet and nutrition to the public, public health personnel, personnel of related community agencies, educators and school personnel, food service workers in group care facilities.
2. To identify nutrition-related health problems existing at the local level.
3. To provide nutrition consultative services and nutrition education services to guide in the development of good food selection habits essential for health maintenance and disease control.
4. To participate in basic and continuing education of public health professional dietitians, educators, and para-professional health personnel who can disseminate and apply nutrition information.

5. To participate in developing standards and provide consultation services to group care and day care facilities to upgrade the nutritional quality and food palatability while improving the efficiency and sanitation of food services.
6. To coordinate public health nutritional services with related programs of other Divisions of the Department of Health and Rehabilitative Services and other community groups.
7. To participate in planning, developing, and evaluating new food and nutrition services in the community (30).

II. ORGANIZATION OF THE NUTRITION SECTION

The administrative office of the Nutrition Section is located in Jacksonville, Florida, where the administrator of the public health nutrition program and various other nutrition consultants involved in state nutrition programs are located. Other positions are located at the regional and county levels. In 1974 approximately 60 public health nutritionists provided services in 65 counties.

Public Health Nutrition Administrator

The Public Health Nutrition Administrator plans and directs the nutrition program for the Division of Health. Special consultative services are provided to the Director of Health, bureau and section personnel, and other state agencies. The director recruits, selects, trains, and evaluates the nutrition staff throughout the state as well as prepares articles for professional journals, magazines, newspapers, and radio and television programs. She also establishes and maintains cooperative relationships with educational, research, governmental, and other agencies concerned with foods and nutrition in order to coordinate and promote activities related to public health nutrition.

Work is performed under general supervision of the Director of Health (31).

Nutrition Training Coordinator

The Public Health Nutrition Training Coordinator acts as an assistant to the Nutrition Section Administrator. She is involved in planning, coordinating, and providing orientation for nutritionists new to public health in Florida as well as for graduate students, dietetic interns, and dietitian trainees. The coordinator also initiates experiences for summer undergraduate students working in the nutrition section and encourages employment of summer students in county health departments. Other responsibilities include the provision of information about food, nutrition, and diet to the public including editing "Nutrition in a Nutshell" newsletter, a bimonthly publication of the nutrition section, and recipes for "Timely Topics." Further activities include the review of publications, educational materials, films, and books in order to inform nutritionists of available materials. She serves as a nutrition consultant to the professional staff in three county health departments in conjunction with her other responsibilities (32).

Maternal Health Nutrition Consultant

The Maternal Health Nutrition Consultant acts as a liaison between the Nutrition Section and the Bureau of Maternal Health and Family Planning. This consultant attends all staff conferences and familiarizes the Bureau staff with new nutritional findings or needs. In working with the administrator of the Nutrition Section, regional county and

project nutritionists, and the Bureau staff, she drafts the nutrition component of the Bureau's nutrition program plan and annual reports. The consultant acts as a technical advisor on the application of nutrition science with emphasis on the new developments in prenatal nutrition, nutritional aspects of adolescent pregnancy, the nutritional relationships to current scientific literature, and the preparation and circulation of abstracts, reviews, and articles as well as planning and participating in statewide inservice programs (33).

Child Health Nutrition Consultant

The Child Health Nutrition Consultant is responsible for coordinating nutrition services with the Child Health Section. Like the Maternal Health Nutrition Consultant, she attends all staff conferences, informs the Section staff of nutritionists' efforts in the area of child health, informs the staff of current nutrition information and works on projects of common interest to both sections. She, in cooperation with regional and county nutritionists, is actively involved in improving food service in day care centers and preparing center owners to meet the nutrition component of the minimum standards being written to implement the statewide licensure of child care centers. To this end, Cook's Conferences are conducted for the purpose of teaching day care center personnel and owners how to upgrade nutritional standards in food preparation and nutrition education. As an educational tool, the consultant uses the booklet "Food Fare for Child Day Care" in order to assist the personnel as to how they can contribute to nutritionally adequate diets and provide week-planned

meals at a reasonable cost. Also included in the booklet are suggestions about ways to involve children in daily activities concerning food and nutrition. Further activities include reviewing the literature for books, films, and other educational materials that nutritionists might find useful in their work with children. This nutritionist serves as an advisor to community and state associated programs including the Florida Association for Children Under Six and Headstart (34).

Institution Nutrition Coordinator

The Institution Nutrition Coordinator has the the responsibility of coordinating nutrition and food service programs in state institutions within the Department of Health and Rehabilitative Services. Divisions to which services are given include the Divisions of Correction, Mental Health, Retardation, Youth Services, and Health. Food service surveys and consultation to local jails and detention facilities are conducted in order to improve nutrition standards. As a continuing educational effort, the Coordinator is responsible for planning and implementing Food Service Director's Conferences. Topics included are job specifications; planning and organization; menu planning, theoretical and practical; purchasing; and physical plant design and building qualifications. Economic surveys are conducted under the supervision of the coordinator. Currently, a study documenting food production shortages and instable food prices was used to obtain increased funds for institutional ratio allowances. Further, the nutritionist participates in seminars and workshops conducted by the Division of Corrections for the staff and administrators of local jails (35).

Institutional Nutrition Consultant

The Institutional Nutrition Consultants serve as a liaison between the Nutrition Section and Bureau of Health Facilities. The consultants work to improve food service and nutrition in all private and local institutions. They are responsible for participating in dietary and food service surveys on the certification and licensing of institutions. Other activities include recruitment and training of nutritionists responsible for surveys as well as their orientation to the section. Workshops and educational classes for food service personnel, dietary employees, and dietary assistants are also planned and implemented. Consultation and instruction to dietary staffs and other professional staff such as physicians, nurses, social workers, and dietitians in dietary, nutrition, and food service facilities are provided. They assist in providing consultation to building committees, administrative officials, architects, engineers, equipment specialists, and others in planning and evaluating food service departments. The Institutional Nutrition Consultant II supervises four institutional nutrition consultants assigned to geographic regions within the state who participate in surveys as well as provide consultation services to the local institutions (20).

Public Health Nutrition Consultant II

The Public Health Nutrition Consultant II works in directing the nutrition program in a large metropolitan county health department, as a consultant in nutrition and dietetics for a region of the state, or in planning and conducting the nutrition and dietetic components of a

specialized county health program. The consultant plans, coordinates, and evaluates nutrition programs and services. She serves as the nutrition specialist for public health nutritionists under her supervision as well as professionals in state or private agencies located within her area (31). Specific duties as related to a regional consultant will be discussed in Chapter IV.

Public Health Nutrition Consultant I

The Public Health Nutrition Consultant I is responsible for conducting a nutrition program for a small or medium size county health department or assisting in a large metropolitan county health department or specialized county project. She serves as a consultant on nutrition and dietetics to the county health officer, public health nurses, sanitarians, and other department staff and maintains cooperative relationships with civic, educational, and governmental research personnel concerned with foods and nutrition. Further responsibilities include the direction of the design and development of exhibits, posters, and literature for use in nutrition educational programs given to schools, communities, and other groups. She also participates in preparing and conducting inservice education programs for professional workers such as medical and paramedical personnel, teachers, and welfare workers as well as consultation services to food service employees of group care facilities (31).

Nutrition Resident or Public Health Nutritionist

The Public Health Nutritionist is responsible for education and counseling individuals and groups of persons in food and diets under the

supervision of a public health nutrition consultant. This position is assigned by the state to counties interested in initiating a nutrition program in the county level. Salary for the position is paid by the state for one to two years at which time the county is to have money budgeted to insure full salary payment. The nutritionist provides nutrition education for individuals or groups of persons with specific nutritional problems as well as develops and initiates food demonstrations in areas such as food selection, preparation, and budgeting. Further, she prepares exhibits, posters, and literature for publicity and educational purposes in conjunction with assisting public health educators, nurses, and teachers in teaching nutrition to school children. Assistance with nutrition, food service, and meal planning are also provided to employees of hospitals, nursing homes, and other group care facilities (31).

CHAPTER IV

EXPERIENCES WITH THE REGIONAL NUTRITION CONSULTANT

Mrs. Diane R. Koenig, the regional nutrition consultant with whom the student studied, provides consultative services in eight counties located in the south central part of the state, as shown in Figure 3. Each county varies as to the kinds of health department facilities available and types of existing community and state agencies located within that area. Because the counties involved are broadly distributed across the state, much of the consultant's time is spent in travel; therefore, careful planning of time is of major importance. Consequently, services offered by the nutritionist vary accordingly (36).

The counties in the field experience are rural in nature and have a high percentage of elderly people. Therefore, diseases most prevalent in these areas are those associated with aging including heart disease, cancer, emphysema, diabetes, cirrhosis of the liver, and arteriosclerosis. Programs to meet these needs must therefore be implemented into public health care systems in each county (4).

The birth rates and infant mortality rates for the south central area in comparison with the state figures are shown in Table 2. In 1973 five of the counties had a birth rate below that of Florida, while three counties--Desota, Hardee and Sumter--had high rates. The infant mortality rate in Florida was 19.0 per thousand live births in 1973. A higher rate existed in Desoto, Hardee and Manatee counties showing a



Figure 3. A map of the state of Florida showing the south central region.

TABLE 2

RESIDENT BIRTH RATES PER 1,000 POPULATION AND INFANT MORTALITY RATES PER 1,000 LIVE BIRTHS, BY RACE, BY COUNTY, FLORIDA, 1973

Resident Rates	Year	Fla.	Charlotte	Desoto	Hardee	High-lands	Manatee	Pasco	Pinellas	Sumter
Birth Rate	1973	13.7	7.7	17.7	21.1	12.5	11.5	11.2	9.6	16.9
White	1973	11.9	7.4	16.3	21.6	9.7	10.1	10.7	8.2	16.0
Nonwhite	1973	24.1	22.5	22.7	17.2	24.8	22.4	22.7	26.1	19.8
Infant Mortality Rate	1973	19.0	17.9	21.4	41.8	12.5	24.2	17.9	18.0	12.8
White	1973	16.2	19.2	19.4	42.7	6.6	22.7	17.6	16.5	13.0
Nonwhite	1973	26.9	6.0*	26.7	32.3*	22.7	29.7	21.5*	23.8	12.3*

*Based on a sample size of only 100 live births.

Source: Division of Health 1973 Florida Vital Statistics. Department of Health and Rehabilitative Services, Jacksonville, Florida.

particular need for extensive prenatal and postnatal health care and nutrition education for all mothers (4). Hardee County with an infant mortality rate of 41.8 is of special concern in this respect.

In order to plan activities efficiently for each county, the nutritionist drafts a yearly program plan in which goals are established for the on-going year. General objectives followed are: (1) the identification of nutrition related health problems existing in each county, (2) the determination of priorities of need for nutrition services and (3) the decision as to which programs are needed in order to alleviate the progressing problems. With the development of the programs to be initiated during the next year, the nutritionist routinely maintains services to each county including: (1) providing accurate information on diets and nutrition to health department personnel and other professional and nonprofessional personnel who can provide and apply nutrition information, (2) coordinating the health department nutrition program with the related services of other agencies and groups in the community and (3) providing accurate and authoritative information at all times by continuing education in the fields of nutrition and diet therapy through state and local workshops as well as the review of current scientific literature (36).

Direct services offered by the regional nutritionist may be categorized into three major areas: diet counseling, nutrition education, and nutrition consultation. Observations of these services including discussions of the student's special project are described below.

I. DIET COUNSELING

Diet counseling provided by the regional nutrition consultant included direct instruction on nutrition and diet to population groups which are considered high risk in terms of inadequate health maintenance. Individual as well as group instructions are given concerning maternal, child and adult nutrition.

Maternal Health

Three maternal and family planning clinics were observed by the student. The first was located at the Dade City County Health Department in Pasco County. The nutritionist counseled four new maternity patients concerning diet during pregnancy. Three of the four patients were progressively losing weight during their pregnancy while one gained excessive amounts. One of the group, was a Mexican-American woman who had little money and was unable to obtain food stamps for various reasons. Pamphlets were explained and given to the patient concerning low cost foods high in protein, vitamins, and minerals. In conjunction with the explanation of nutritional value, the nutritionist encouraged foods relating to the patient's particular culture. The nutritionist consulted with the public health nurse concerning financial aid for the mother which could be provided from different agencies. General prenatal nutrition counseling was provided to the other patients including a review of the Four Basic Food Groups as well as foods rich in iron. If the patients were to have their child in the near future, a pamphlet "Feeding Your Baby From 1-3 Months" was given and explained. Buying tips concerning formula and baby food were also discussed.

The second clinic observed was located in the Highlands County Health Department. Because of a lack of referrals from the nursing staff, the nutritionist conducted an informal discussion on foods and nutrition during pregnancy for the patients in the waiting room of the clinic. Several questions were asked and the nutritionist was very explicit in answering each individual question. The nutritionist displayed her expertise in leading the group into the discussion of related nutrition topics. The student believes that this is a most important quality which is obtained by experience as well as by personal enjoyment of participating in group discussions. Also important, is the establishment of rapport between the discussion leader and the patients. This encourages open conversation among the group in relation to topics pertinent to their personal health needs.

The third clinic observed was located at the New Port Richey County Health Department located in Pasco County. During the family planning clinic, two young women were referred for individual counseling on iron-rich foods. Both mothers were considered to have had iron deficiency anemia while pregnant with their last child. Although iron supplements were received during pregnancy and after birth, their iron stores were depleted and both mothers were in an anemic condition. Each mother had hemoglobin levels below 12 grams per 100 milliliters of blood. The nutritionist discussed the pamphlet "Need Iron" with each patient as well as practical implications of anemia and the importance of its control.

In each clinical setting, whether it be individual patient counseling or group discussion in waiting rooms, the nutritionist is responsible for

conveying nutrition information concerning each particular health need. This cannot always be accomplished. Because the regional consultant can only allocate enough time to visit each clinic monthly, continuing counseling for many problem patients cannot be maintained on a weekly basis when needed. Therefore, the initial meeting may be the only time allowed for nutrition counseling. If the patient is interested in self-health care, nutrition information will be received and used accordingly; however, oftentimes the motivation is initiated in the first meeting but lost because of the lack of continued interest which could be provided if the nutritionist were seen periodically. In many cases the patient cannot grasp the information needed for her particular needs during the first meeting. Therefore, subsequent meetings should be scheduled. This is unrealistic when a nutritionist is not located in the county. Consequently, the student feels that each county health department involved in maternity and family planning clinics should employ a nutritionist at the county level. In this manner, the nutritionist would not only be involved in the clinical setting but home visitation as well.

In contrast to these settings, the student observed a prenatal clinic located in Hillsborough County. Although this is not a county to which the nutritionist gives consultative services, her office is located in this county and friendly communications are established between the regional nutritionist and the Hillsborough County Nutritionist. The clinic is located at the Lee Davis Health Center where services are provided to medically indigent persons in conjunction

with general health needs, diabetes control, child health, and prenatal care. The student observed the prenatal clinic established for new maternity cases only. Before seeing the doctor, all new patients attend a group class on their first visit to the clinic. During the class, a public health nurse discussed several aspects of pregnancy and delivery as well as the procedure for entering the hospital. A social worker also discussed different forms of financial aid available before and after the child is born and where this information can be obtained. A home economist of the Hillsborough County Extension Service served a casserole that contained an inexpensive source of protein and gave each member of the class the recipe. The Hillsborough County Nutritionist discussed diet during pregnancy, emphasizing food selection from the Basic Four Food Groups as well as methods of food preparation. Emphasis was given to the high salt content of certain foods and unwanted calories from concentrated sweets. General information concerning constipation and indigestion in relation to pregnancy and nutrition was also discussed. When the patients return on a regular prenatal clinic visit, the nutritionist counsels individuals who are referred to her by the public health nurses or doctor.

In contrasting the prenatal clinic in Hillsborough County to those of the smaller rural areas of Pasco and Highlands County, the clinical facilities offered to the nutritionist are decidedly different. In the rural counties, the nutritionist was fortunate to have a private area for individual counseling. However, group programs could only be given in the waiting rooms where the patients are in the process of seeing the doctor or public health nurse. Therefore, a planned program was

impractical since the patient could only see portions of the presentation or none at all. As previously mentioned, time allocations for the regional nutritionist is limited at the county health departments. When the nutritionist visits a clinic, individual counseling with patients who have immediate nutrition-related problems must be of primary concern; therefore, there may be time limitations to conducting group programs. In contrast, informal group discussions held in the waiting rooms when the nutritionist is not seeing patients is an invaluable teaching aid.

As a consequence of studies involving pregnancy and nutrition, the student realizes the importance of good nutrition in maintaining adequate health for both the child and the mother. Evidence of low infant birth weight in relation to unsatisfactory maternal nutrition, as well as the occurrence of toxemia in conjunction with excessive weight gain of the mother establishes the importance of nutrition education for the child-bearing population (37).

Child Health

The student observed Well Child Clinics in Manatee and Highlands County Health Departments. At each clinic, the nutritionist counseled mothers concerning normal infant feeding, normal child nutrition as well as dietary modifications in relation to nutrition-oriented problems.

At the Manatee County Health Department, three mothers were referred to the nutritionist by the public health nurse. Two of the three toddlers were considered to have iron deficiency anemia with hemoglobin values below 12 grams per 100 milliliters of blood. A twenty-four hour dietary recall was required from each mother to find

that the children were eating too many snack foods between meals, therefore causing a loss of appetite at regular mealtime. The nutritionist discussed the pamphlet "Need Iron" with specific emphasis on inexpensive iron-rich foods as well as nutritious snacks to be used instead of concentrated sweets. Suggestions as to teaching techniques used with the child in relation to improving eating habits were discussed. The nutritionist explained to each mother the practical implications of anemia and the importance of its control. The third mother that the nutritionist counseled had an 11-month old infant who refused to eat any food except breads and milk. It was revealed during the interview, however, that the mother was feeding the child cookies between meals whenever the child asked for them. Again, the child was not hungry at mealtime because he was continuously snacking throughout the day. The nutritionist discussed practical suggestions as to teaching the child to eat a larger variety of foods. These suggestions included: (1) eliminating snacks one hour before meals, (2) using smaller plates with smaller food portions, (3) using "finger foods" at meals that he can hold while eating, and (4) providing nutritious snacks instead of cookies and candy.

The nutritionist counseled three mothers at the Highlands County Well Child Clinic in relation to their children's specific problems of anemia and obesity. Similar consultation concerning anemia was used with each mother; however, one child was slightly obese with the characteristics of the so-classed "milk anemia baby." This term refers to a child who is not properly weaned and is consuming only milk when he should be eating a variety of other foods. In this manner, the

child becomes iron deficient because milk is low in iron. The nutritionist discussed the proper quantities of food from the Basic Four Food Groups that the child should be eating with strong emphasis on those foods which are rich in iron.

The importance of nutrition education for mothers so that their children will achieve maximum growth and vitality is recognized by the student. The nutritionist uses the Well Child Clinics as an opportunity to teach mothers the nutritional requirements of their children. The phenomenon of growth involves more than an increase in size; it involves changes in body functions and in body composition which are reflected in nutritional requirements. These are seen particularly during the period of infancy, for it is then that growth is most rapid. Not only does the child require the nutrients for growth but, in addition, because of his higher metabolic rate and more rapid turnover of nutrients, his requirements for maintenance per kilogram of body weight are higher than those of the adult (38). Therefore, the mother must be aware of the nutritional requirements for her child at different age levels. The nutritionist, by means of the clinic, teaches individually and in groups the importance of nutrition as well as proper eating patterns including meals and snacks. Through the personal rapport that the nutritionist establishes with her clients, discussion of the child's problems are most easily determined in order to establish corrective measures. In relation, the nutritionist works closely with the physician and nurses in order to plan the most effective methods of education for the mother.

In connection with child health, the student had the opportunity to visit the Tampa Diagnostic and Evaluation Clinic in Hillsborough County.

The purpose of the clinic is to evaluate children from birth through eight years of age who are suspected of being mentally retarded. The clinic provides a full range of diagnostic and consultative services including pediatric, social, psychological, nutritional, and speech and hearing evaluation services. Laboratory and radiological studies specifically needed in diagnosing causative factors of mental retardation are provided. Once a child has been seen by the personnel of each discipline, a staff conference is held to review the findings and give diagnosis and recommendations. Periodic follow-up initiated by the clinic or patient is available to the family. Contacts are encouraged at the time of a developmental crisis, such as when the retarded child begins attending school; when social problems affecting the child's welfare arise; or when help with problems of home training is desired. Through home visits, the public health nurse, employed by the clinic, attempts to evaluate the child in a familiar setting and to assist the family to articulate their concerns on their own home ground. It is felt that this enables the entire staff to better understand the unique problems each family may encounter in day to day living with their child. Information gained by these visits enables the clinic staff to make more realistic and individual recommendations for each client and his family.

Nutrition services are provided to patients and families by a nutritionist employed by the clinic. The nutritionist works in conjunction with the staff in planning programs for the patient after evaluating the present dietary intake of the mentally retarded child. A one-week food intake record kept by the mother is used in evaluation.

In instances where transportation is a major problem for patients, the nutritionist contacts the area public health nurse, regional nutritionists, and personnel from other agencies who have an on-going relationship with the family in their community. Through consultation with these persons the nutritional needs of the patient are then alleviated or improved (39).

In comparison to this clinic, the student has visited the Child Development Center in Memphis, Tennessee. Because of the greater number in staff, the center in Memphis is both service and training oriented in contrast to the Tampa Diagnostic Clinic which is responsible only for the service offered to the public. The nutritionists in both cases, however, play an important role in the initial evaluation as well as the followup consultative services presented to the patient and their family.

Adult Health--Diabetes

The responsibilities of the regional nutritionist also include therapeutic diet counseling in relation to adult health and diabetes. Patient referrals are seen at the various county health departments, when possible; however, if patient is unable to attend, the nutritionist makes home visits in conjunction with individual patient needs.

A home visit was made in Manatee County to an elderly diabetic patient who maintained extremely high blood sugar concentration (over 500 mg percent) and was receiving 160 units of U100 insulin per day. The patient complained of leg pain and infections of the eye which had persisted for some time. The woman was familiar with the foods on the

diabetic exchange lists but per portion control was poor because of the extensive use of convenience foods which were high in carbohydrate and fat. The nutritionist reviewed the diet pattern and size of servings with the patient emphasizing the need to follow the diet more closely. The woman was very much involved in maintaining conversation concerning private problems and was reluctant to listen to the nutritionist. It was believed by the student, that the patient would follow few suggestions given by the nutritionist. In this particular situation, periodic visits would have to be made in order to work with the diabetic in relation to proper food selection, correct portion size, and misconceptions concerning diabetes. Even with continuing effort, the student is unsure as to the effectiveness of diet counseling when mental anxieties are present in such great proportions. However, it is evident that the blood sugar levels could be reduced if the diet were followed.

Group diabetic counseling was not observed with the nutritionist; however, the student did have the opportunity to observe a diabetes class at the Lee Davis Medical Center given by a nutritionist associated with Hillsborough County Health Department. The presentation by that nutritionist included a question and answer session emphasizing general rules for diabetics including food preparation, meal pattern establishment, and food portion regulation. Exercise and insulin requirements were also discussed as well as the importance of a doctor's care when activity change did occur. The class was well accepted by the recipients and many questions were asked. Because the class was to last only 20 minutes while patients were waiting to see the doctor, a short,

well-planned program was initiated with several specific concepts to be presented and taught.

Adult Health--Cardiovascular Disease

The student attended the Cardiovascular Screening Clinic offered by the Highlands County Health Department. This clinic is provided free for persons in the community who have been referred by their doctor for the service. Blood and urine samples are analyzed, blood pressure and an electrocardiogram are taken, and the medical history is reviewed. The results are sent directly to the client's private physician. This service enables the patient to receive extensive testing for heart disease without entering the hospital and avoids the extremely high medical payment for these services. The nutritionist provides consultative services to the clinic personnel as well as individual counseling for the patients. During the observed clinic, an informal discussion was held in the waiting room concerning general nutrition and low cholesterol foods. The discussion was very enthusiastic with many questions concerning new products with low cholesterol content. The informality of the discussion increased the interest and participation among the patients as well as encouraged personal questions pertaining to specific health problems.

The nutritionist individually counseled a woman concerning a low sodium, low cholesterol and low calorie diet for her husband who was recovering from a heart attack. The client was given pamphlets in relation to this diet and was instructed on food preparation and food portion size restriction in regard to establishing the important

regulations which must be followed in order to main that particular diet.

In relation to cardiovascular disease, the nutritionist presented a program about nutrition for the West Pasco Strokers Club. Response was excellent and the audience had many questions during the discussion period. The nutritionist described services which she provides in relation to diet counseling or general nutrition information provided to the public if requested. Questions were asked concerning special diets and misconceptions in regard to vitamin supplementation and heart disease. The nutritionist answered each question explicitly in relation to any misinformation that the audience had encountered. The student believes that diet in relation to the regulation of heart disease is important and must be taught through the efforts of the nutritionist in the community.

It has been designated that hypercholesterolemia and hypertension act as major risk factors in the occurrence of heart disease, and inherent to the risk factor approach is the concept of decreasing risk through appropriate medical intervention. Diet is the cornerstone of therapy for any of the primary lipid transport disorders and often dietary manipulation alone will reduce cholesterol levels significantly and normalize plasma lipids. In relation, obesity and hypertension are common occurrences in the same individuals thus causing the heart to labor under this double load. It has been shown, however, that diet can also aid in the treatment of obesity and hypertension. Therefore, the success of dietary management depends on the rapport between the doctor, nutritionist and patient. Through direct counseling and group

discussions, the regional nutritionist aids in the decrease of risk factors by providing information, both scientific and practical, concerning therapeutic diets in the regulation of heart disease.

II. NUTRITION EDUCATION

The regional nutrition consultant provides group classes about normal nutrition needs and the use of food. Group discussions are provided in school classroom nutrition education programs--preschool through university--as well as community nutrition education programs in relation to normal family nutrition, meal planning, food selection, purchasing, and preparation.

School Nutrition

Two school nutrition programs were presented by the nutritionist during the field experience, one to a group of students representing three classes (health careers, health, and physical education) at Gulf High School, and a second program to a group of home economic students at Hudson High, both schools in Pasco County. The programs were similar in content except for individual questions asked by the students. The nutritionist explained to each class the job specifications and responsibilities of a regional nutrition consultant and the location which she serves. Basic concepts of the Four Food Groups were presented by use of the Dairy Council Food Comparison Charts for teenagers and plastic food models. The nutritionist emphasized nutritious snacks for the teenage population as well as ways to control weight if concerned with gaining excessive pounds. Both classes seemed attentive although

few questions were asked. In the classroom, the nutritionist's technical background of nutrition science can be greatly utilized since few teachers in the school systems are qualified to teach nutrition. Nutrition is not a required subject for teacher certification. Therefore, the nutritionist can be used not only to inform the student but also the teacher who knows little of nutrition and its scientific as well as practical applications.

In relation to school nutrition, the nutritionist presented a general nutrition information program for workers in a center operated by the Ridge Area Association for Retarded Citizens. The workers are mentally retarded; therefore, information was kept to a very simple level of understanding. Ages of the workers varied from early teens to young adults. The program presentation centered around the vegetable and fruit group with the use of food models and the worker's own lunches serving as visual aids. The student was not certain as to the extent of the worker's understanding; therefore, the retention of information was also questioned. The nutritionist believed that a greater degree of nutrition education could be accomplished by consulting with the workers' parents or guardians in relation to general nutrition and weight control. Most of the workers did live with someone, therefore, home situations could serve as a basis for good nutritional practices. The nutritionist did schedule a future program time at which the parents and guardians will be asked to attend. This was the first opportunity that the nutritionist had in working with the retarded and therefore was unsure of what the center's director wished to accomplish

since little background information was given. The student believes that a few simple concepts were learned by the workers; however, more could be accomplished in regard to nutrition education if programs are planned to educate the parents about proper child feeding practices. Several of the workers were obese, thus diet counseling regarding weight control could be directed toward the parents and those workers who did live alone could be taught to understand weight control methods if direct counseling were to be given.

Family Nutrition

Several programs throughout the field experience were presented in relation to family nutrition. In Highlands County, the nutritionist presented a food budgeting program to a group of women. A film strip was shown in regard to choosing the most food for the least price. In conjunction, the nutritionist showed the group the difference in the prices of food found in a local supermarket when the rules of budgeting were followed as compared to when they were not followed. Individual counseling on economical and nutritious foods was provided for one woman who had been referred to the nutritionist by the county welfare director. The nutritionist compiled with the woman a list of foods to buy her family. The money allocated would have to last for two weeks; therefore, careful planning was imperative.

A second program was presented to the Beacon Woods Homemakers Club located in Pasco County. The nutritionist discussed nutrition and the new labeling regulations. The group was quite responsive and asked a variety of questions during the discussion period. The nutritionist

provided visual aids about the information given on the new labels as well as a list of the US Recommended Dietary Allowances for all ages.

In each program, the nutritionist was well organized and displayed a practical knowledge of foods and family nutrition needs.

In conjunction with family nutrition, the student presented two programs. Upon request from the Weigh-Less Club at Englewood in Charlotte County, the student presented a one-hour program about nutrition and weight control. Before the program, the student reviewed scientific literature, pamphlets, and general reference information concerning obesity and nutrition in preparation for the program. Consultation with the nutritionist enabled the student to choose certain objectives which were to be presented and believed to be beneficial. The program was centered around four specific steps to safe weight control. These steps included: (1) seeing a doctor, (2) setting a weight goal, (3) retraining eating habits, and (4) being more active. An introduction to the presentation included a discussion of the health risks associated with obesity and the reasons why people believe they become overweight. Visual aids were prepared to introduce the four basic steps using food models, Dairy Council Comparison Charts, and a pamphlet discussing the Basic Four Food Groups. The group was most responsive when the student answered specific questions from the club members. The student later thought she could have been more flexible in adjusting her presentation to other interest areas introduced by the members during the discussion period. If this had been accomplished, the group might have appeared more responsive to

discussing specific problems. She did believe that basic concepts were presented and retained by the group. The discussion between the nutritionist and the student after the presentation was most beneficial in the evaluation of the program and methods of improvement. It was agreed that more opportunities for experience in group discussions would improve the student's techniques of material execution and discussion improvision.

The second program was given at the Avon Park Alcoholism Center. The center is available to persons in the community in need of rehabilitative services. Sessions with the patients are conducted by physicians, psychologists, and social workers. Each month, the nutritionist presents a program to a group of approximately 45 persons about the subject of nutrition and alcoholism. The student was asked to present the program during her field experience. Because the student knew very little concerning alcoholism and nutrition, much research and study in preparation for the program was made. Scientific information was obtained from articles written by Robert E. Olson, Joseph J. Vitale, Joanne Coffey, and Robert H. Hillman. Objectives established for the program were as follows:

1. To inform the patients how malnutrition interacts with alcoholism and the importance of a well-balanced meal in order to control these interactions.
2. To inform the patients of the nutritional value of alcohol as compared to other foods.
3. To suggest ways in which nutritional status can be improved by following a well-balanced diet.

Visual aids were prepared concerning the nutrient content of different forms of alcoholic beverages. Food models as well as pamphlets discussing the Basic Four Food Groups were also used.

The presentation was well accepted by the group and the student was very much at ease after she began. The patients had, during their stay at the center, been forced to ask questions in order to become more outward in discussing subjects; therefore, the group was very free in asking questions and making comments. On the occasions when answers by the student were somewhat confusing or incomplete, the nutritionist aided in clarification. The program progressed with ease during the hour and the student was pleased with the outcome. Additional experience with group discussions and question and answer periods would prove most beneficial to the student.

III. NUTRITION CONSULTATION

The regional nutrition consultant provides consultative services to professional workers within the community. Planning and coordinating nutrition services with each local health department is a major responsibility in conjunction with inservice education conferences with the professional staff. Consultative services are also provided to state or local, official or voluntary health, welfare, and educational agencies in relation to nutrition services available to the community.

Health Department Staff--Planning and Education

The regional nutrition consultant visits each county to confer with the public health nurses and health officer and to assist where needed.

Information of county activities and current nutritional problems within the county are brought to the attention of the nutritionist on her visits. Nursing inservice conferences are held frequently in order to provide current information on diet and nutrition as well as provide educational materials for use in the health department and in the field during home visits. The nutritionist encourages the public health nursing staff to make referrals for nutrition counseling about therapeutic diets, normal nutrition, and food buying in order to establish public awareness of the services provided by the nutritionist. She also serves as a liaison between nutrition services offered in the health department and medical care provided by the clinic physicians. The nutritionist requests information given routinely by the clinic physicians concerning nutrition in order to provide consistency in patient instruction. The nutritionist works closely with the physician in choosing appropriate pamphlets and visual aids about general nutrition and therapeutic diet instruction for his patients.

Two nursing inservice conferences were observed by the student. The first occurred at the Highlands County Health Department. The nursing supervisor had requested information concerning juvenile diabetes, its diagnosis, and symptoms as well as its differentiation from maturity onset diabetes. The nutritionist reviewed general concepts as well as the advantages and disadvantages of the "liberal" or "free" diabetic diet. The staff had several questions and the nutritionist answered each explicitly. It was obvious from the questions asked that nutrition education was not an integral part of many of the nurses' educational training. The student believed that the nurses should have a better

understanding of the subject and its application to the services that they provide. It is imperative that a nutritionist be available for consultation to the public health nurse in relation to diet counseling when nutrition-oriented diseases are involved in the services provided by the nurse.

An inservice nutrition program for the elderly was presented to the public health nursing staff of the Charlotte County Health Department. Emphasis was placed on the needs of the elderly in terms of the relationship between aging and nutrition requirements, ability to buy food in relation to choosing nutritious foods, and the social implications of eating in regard to adequate food intake. During the discussion period the staff sought help with feeding problems of individual patients and adjustments which family members may encounter. As a result of questions asked during the discussion, it became apparent that the nurses lacked an understanding of basic nutrition and aging concepts. This understanding is needed by public health nurses who serve such a large population of elderly persons. The student believes that all public health nurses should have a greater knowledge of nutrition in relation to health and disease at all ages. It is important for nutritionists to provide inservice consultation to nursing staffs in order to promote more efficient medical care by equipping nurses with scientific as well as practical applications of nutrition.

Other Agency Consultation

The regional nutrition consultant provides consultative services to state or local, official or voluntary health, welfare, and educational

agencies located within the region that she serves. As one responsibility the nutritionist works closely with county extension home economics agents who are employed in the US Department of Agriculture. In Highlands County, the nutritionist and student toured the county agriculture center and acquired new materials published by the Department of Agriculture. While talking with the home economist located at the center, the nutritionist provided suggestions for topics and education techniques for use with a group of women from low income families. The group is interested in meal planning and food preparation conducive to weight control; therefore, the nutritionist informed the home economist of special projects and teaching aids which could be used with such a group.

In Charlotte County, the nutritionist provides consultative services to the registered dietitian at Medical Center Hospital. This dietitian is very active in planning community programs pertaining to nutrition education and plans to begin a series of three classes about diabetic diets for patients referred by physicians. One class will be devoted primarily to food preparation using recipes in the Sunshine Meals diabetic recipe book. Food demonstrations will be given by the local county extension home economics agent with whom the nutritionist also met. Suggestions were given to the home economist pertaining to planning menus to be used for the class presentation.

Working with other agencies located within the different counties, the nutritionist aids in the implementation of nutrition education programs in the community and provides professional, authoritative instruction regarding scientific as well as practical nutrition

information to professional and community representatives of various agencies and health care facilities.

Hospital--Food Service

The regional nutrition consultant visits institutions in the community upon request by the Institution Nutrition Consultants of the Bureau of Health Facilities. The nutritionist acts as a member of the survey team and is responsible for participating in dietary and food service inspection necessary for regulation of the certification and licensing of institutions. In Pasco County, the nutritionist participated in the annual survey at G. Pierce Wood Memorial Hospital, a state mental hospital located near Arcadia, Florida. Specific rules and regulations are imperative for hospital licensure and certification; thus, the nutritionist rigidly follows the licensure specifications as stated in the Florida Statutes. Procedures used in completing the survey include: (1) inspection of the kitchen in terms of facility, equipment, and personnel sanitation, (2) inspection of menu and recipe files in relation to adequate nutrient requirements in regard to normal and therapeutic diets, (3) review of kitchen procedures including serving time, employees' work schedules, and cleaning schedules, (4) availability of required references located in the dietary department such as a procedures manual and an approved diet manual, and (5) inspection of patient charts in order to locate revised diet orders which correspond to actual meals that the patients receive.

Throughout the survey, several suggestions were made to the hospital consulting dietitian and food service managers in regard to the need for

continual supervision of refrigeration as several machines were not at the temperature needed for optimum food sanitation. Citations were not made, however, because several of the employees had used these units continually for the past hours. The temperature decrease may be caused by successive openings. Other comments were made in relation to keeping foods covered while refrigerated even though use may take place in a short time span. One citation was made, however, concerning the inspection of patient charts. Diet orders were not being entered monthly by the physician. In a majority of the charts inspected at one station, diet orders could not be found on the charts for the past several months. This could be deemed harmful if a diet change was needed in order to assure optimum health for the patient. Whether the citation is acknowledged will be the responsibility of the hospital administrator who will inform the physicians of the deficiency.

The survey was a learning experience for the student. Sanitation as well as general nutrition and food service administration concepts were integrated into an institutional setting which was shown to be of utmost importance especially in relation to such a large population as found in this mental hospital. It was observed that regulations written in the hospital licensure manual were carefully chosen in order to provide optimum care and treatment for patients as well as consideration of the construction, maintenance, and operation of the hospital itself. In order to maintain such standards, the nutritionist proves to be an important member of the survey team showing an expertise in nutrition and food service concepts which are important in the maintenance of good health.

Other Group Food Service Facilities

In relation to food service facilities, the regional nutrition consultant provides services to the nutrition programs for the elderly. One of the most active programs is located in Manatee County where meals are home delivered as well as made available at congregate feeding sites. Monies for this program are available from federal funds provided by provisions under the Title VII and Title III of the Older Americans Act of 1965. The primary purpose of the nutrition program is to design appropriate ways for the delivery of food services which enable persons to enjoy adequate palatable meals that supply essential nutrients needed to maintain good health. Other purposes that are an integral part of the program are opportunities for socializing with friends and companions, participation in leisure time activities, consumer and nutrition education, and counseling and assistance in utilizing other community resources (40).

Services which the nutritionist provide include: (1) consultation to the program's nutrition educator to aid in planning and executing nutrition education programs which are presented at the congregate feeding sites, (2) inservice programs for the kitchen staff and site managers in relation to general nutrition and sanitation, and (3) consultation to the executive director and project director in regard to food service management and optimum utilization of equipment and materials in relation to the available facilities which are to be found.

Several of the congregate feeding sites were visited throughout the field course. Included were those which did accomplish the purpose of the program including socialization and participation in activities;

however, in others, the participants ate with no communication among themselves, with the males sitting at one table and the females at another. In all areas visited, however, the meals were well accepted and believed by some to be better than their own, adding that eating at home alone was not enjoyable.

As an observer, the student believes that the program is a worthwhile project. Not only does it provide one-third of the recommended dietary allowances for persons 65 years and older but has proven to bring about significant improvements in the quality of diets of the participants (40). The services of the nutritionist are of vital importance in the maintenance of this program. By providing consultative services to the program administrator and staff, optimum food services can be provided to the participants with maximum utilization of funds available.

IV. STUDENT PROJECT

The special project selected during the field experience involved the creation of a visual aid to be used with mothers during a well child clinic. The topic was comprised of feeding information for the infant to one year of age. It was explained by the nutritionist that three pamphlets were available by the Division of Health: one was titled "Feeding Your Baby 1-3 Months," another included feeding information for infants 4-8 months of age, and another included feeding information for infants 9-12 months of age. However, there was not a form of teaching aid which included information for these ages combined. Since the nutritionist may only see the mother once during the year or until the

next child is born, it is imperative that information be given concerning infant feeding throughout the first year of life in hopes of having the child consume table food by age one. Nursing staff may not refer all mothers to the nutritionist when needed; consequently, the visual aid must be convenient for informal discussions in the waiting room, individually or as a group. The visual aid must therefore be large enough to be read by the audience and small enough to be handled with ease by the nutritionist. The information presented must be written at a simple level of understanding, using short phrases and recognizable words, so that recipients ranging from ages 12 and older can understand and retain the information given.

The student had little experience involving feeding practices of the infant; therefore, developing skills in conveying such information to the public would be rewarding and beneficial.

The visual aid was to be used at the Well Child Clinic in Manatee County. The nutritionist was to observe the student for the first hour at which time she would then leave to attend a meeting placing the clinic under the supervision of the student.

Planning

A planning conference was held with the nutritionist to discuss information which would prove most useful with the population involved. The nutritionist made available an infant nutrition file containing articles from magazines, pamphlets, and professional journals in order to review the information which would be chosen for use in the project. General nutrition concepts were reviewed in relation to this age group

to determine the nutritional needs for optimum growth. Sanitation principles were considered in relation to breast feeding and bottle preparation. Practical consumer concepts in buying infant food were reviewed in regard to maximum nutritional value as well as general information concerning formula preparation. In order to provide this information in the simplest, most precise form, the following objectives were chosen as guidelines for the project:

1. To instruct breast feeding mothers concerning proper maternal nutrition, sanitation and general infant feeding principles;
2. To instruct mothers concerning bottle feeding including types of formula, its preparation and sanitation, and general infant feeding principles;
3. To instruct mothers of the nutritional needs of their children at ages 1-3 months, 4-8 months, and 9-12 months including feeding schedules, proper foods, and general feeding principles;
4. To instruct mothers concerning the introduction of new foods and self-feeding practices of the toddler;
5. To instruct mothers in buying infant foods in relation to maximum nutritional values.

Development

Of utmost consideration in developing the visual aid was the execution of the information. In simple phrase groupings, principles were determined and placed on a format page approximately 18" by 22" in size with tabs cut into the edges of the pages of each particular section (dictionary fashion) in order to simplify the use of the project. In

this manner, the nutritionist could easily turn to the subject matter in question. The pages were fixated in a spiral ring which enables the user to turn the pages easily while holding the chart in one hand. Appropriate illustrations were used with each grouping in order to captivate the attention of the recipients. Phrase groupings used were kept to a minimum of words in order to provide simplicity. It must be remembered that the purpose of the visual aid was to be used as a guide for the nutritionist in discussion presentation--to enhance the understanding by visual conception--however, the visual aid must also be independent in that it can be used without the commentary of the nutritionist. In this manner, several of the sections could be used in this way although not all. Examples of the format used in the chart are included in Appendix A excluding the illustrations.

Presentation

On the afternoon of October 30, approximately ten children were seen by the nursing staff at the Manatee County Well Child Clinic. No referrals were made by the nurse to the student for nutrition counseling. Because of the lack of referrals, the student began informal conversations with the mothers in the reception area. There was no opportunity presented for the student to use the visual aid prepared for clinic.

The four mothers who were presented for the clinic had few problems with the feeding practices of their children. One mother discussed the increased price of fruit juices prepared by baby food manufacturers; consequently, the student reminded the mother that fruit juices drunk by the entire family could be used for her infant if strained and diluted

properly. Breast feeding was discussed with one mother as she explained successful feeding attempts with her second breast-fed child. Important sanitary and maternal nutritional concepts were well understood by the mother. As the student discussed feeding practices with one mother, others began asking questions concerning their young toddlers just beginning to eat "table foods." The student answered specific questions and was elated by the rapport that was established between the mothers and herself. Discussion continued until the mothers were called into the examination rooms. Questions were enthusiastically asked and the student felt competent in answering.

Evaluation

Because the student was unable to use the project during the designated clinic, the nutritionist provided for the student an evaluation of the project which was tested in both group and individual settings after the student concluded her field course. The written evaluation is presented in Appendix B.

It is believed by the student that the suggestions made by the nutritionist concerning the project content and organization would provide important improvements.

The student regrets not being able to use the project in actual participation, for in this manner the student believes that the project would have been more beneficial to her. However, because of the research conducted in preparation for the project, the student was most competent in answering questions while conducting the well child clinic. An understanding of infant nutrition in relation to maximum growth was most

beneficial as well as planning and developing techniques to provide nutritional instruction to a designated population. The student feels that the project was a successful attempt in accomplishing the objectives set forth and finds a new understanding of the nutritional requirements which are needed by specific age groups.

CHAPTER V

SUMMARY AND EVALUATION

The field course in which the student participated proved to provide an essential segment of her professional training. The integration of theory and practice is of utmost importance in the development of methodology for disseminating nutritional concepts to the general public in the most practical manner.

The student's philosophy and understanding of public health has been strengthened through the observations of an official health agency and the services rendered in coordination with other community agencies both at the state and local levels. The physical, social, economic, and political characteristics of the community were found to be a vital factor in determining what services are made available to an area population. Personal abilities of the student as to the direct application of nutrition principles and services has been strengthened by designing, initiating, and implementing programs in relation to providing nutritional instruction to a designated population. Through the application of these programs, the student feels more competent in the technique of program planning and evaluation as well as proficient in the use of tools and techniques for nutrition education.

Through the opportunity given by this field course, the student has grown in self-confidence and has been strengthened in her personal abilities to perform and initiate the responsibilities of a future public health nutritionist.

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APPENDIXES

APPENDIX A

CHARTS USED FOR THE SPECIAL PROJECT

CHART I

FOOD FOR YOUR CHILD

When Breast Feeding--

Wash breasts
Nurse both breasts for 10 minutes each
Bathe in hot water if breasts swell
Burp baby several times

Foods to Help You Make Milk Daily--

(Illustrations of 4 food groups and number of servings)

CHART II

When Bottle Feeding--

Use formula with iron
For cow's milk formula add iron and vitamins
Refrigerate formula
Do not give more than 32 oz. per day
Sterilize formula during first 3 months
Burp baby often

Formula--

3 oz. Evaporated milk
7 oz. Water
1/2 oz. Sugar

7 oz. Whole milk
3 oz. Water
1/2 oz. Sugar

CHART III

1 - 3 Months--

Morning -
  Formula: 4-6 oz. or breast milk
Midmorning -
  Cereal 1-2 Tbl. with formula
  Formula
Noon -
  Fruit juice: 1-2 Tbl.
  Formula
Midafternoon -
  Formula
Evening -
  Cereal
  Formula
Bedtime -
  Formula

Remember !

Use formula with iron
Start with rice cereal
Thin cereal with formula
If regular juices are used, dilute with water
Offer water when thirsty

CHART IV

4 - 8 Months--

Morning -
  Formula: 5-6 oz. or breast milk
  Cereal: 3-6 Tbl.
Midmorning -
  Strained vegetables or fruit juice: 2-4 Tbl.
  Enriched toast: 1/2 slice
  Formula
Noon -
  Strained meat: 1-3 Tbl.
  Enriched toast
  Formula
Midafternoon -
  Enriched toast
  Formula
Evening -
  Strained meat: 2-4 Tbl.
  Strained vegetable or fruit juice: 2-4 Tbl.
  Cereal
  Formula
Bedtime -
  Formula

Remember!

Egg yolk provides iron and protein
Choose plain strained vegetables and meat Not strained dinners
Cooked vegetables can be used instead of baby food if mashed
Offer water when thirsty

CHART V

9 - 12 Months--

Morning -
  Ripe or cooked fruit or juice: 1/2 cup
  Cereal: 1/2 cup or 1 egg
  Enriched bread: 1/2 - 1 slice
Midmorning -
  Milk or juice: 1/2 cup
  Enriched bread
Noon -
  Finely chopped meat: 2-4 Tbl.
  Mashed vegetables, cooked: 2-4 Tbl.
  Milk: 1/2 cup
  Enriched bread
  Fruit: 1/4 - 1/2 cup
Midafternoon -
  Milk or juice
  Enriched bread
Evening -
  Same as noon

Remember!

Baby should be on table foods by now
Meat, vegetables, & fruit should be finely chopped or mashed
Enriched rice or fruits can be used instead of cereal
Drinks should be offered in a cup

CHART VI

How to Introduce New Foods--

Let baby hold spoon with small amount of food
Use easily handled utensils
1. Spoons with short straight handle
2. Unbreakable cups
3. Dishes with rim to help push food on
Use bite size portions of food
Use small servings
Use a variety of color & texture
If food is not taken at first, try again
Expect the baby to be messy

BE PATIENT !!!

CHART VII

Shopping Tips . . . . Read the Label--

Ingredients are listed in the order that they are found in the food. The greatest amounts, first; the least, last.

STRAINED MEAT

Strained Beef	Ingredients: Cooked beef Beef broth Salt

HIGH MEAT DINNERS

Strained Turkey and Vegetables	Ingredients: Turkey broth Modified cornstarch Turkey gibblets Baked flour

STRAINED VEGETABLE

Strained Squash	Ingredients: Squash Water Salt

HIGH MEAT DINNERS

Vegetables and Ham	Ingredients: Smoked ham Modified cornstarch Tomato puree Carrots, peas, bacon Rice flour Baked flour

APPENDIX B

EVALUATION OF FOOD FOR YOUR CHILD

Organization: Excellent. The addition of tabs cut into the edges of the pages of each section (dictionary fashion) simplified the use of the project.

Directions for infant feeding at various age levels were sometimes split so a page had to be flipped to continue the subject. This would have been better if all directions were together.

Content: Overall, very good. A few changes would add to its value:

- Description for making formula--change ounces of sugar to teaspoons or tablespoons.
- Cooked vegetables can be used instead of baby food if mashed--Change to "Mashed Cooked Vegetables . . ."

In general, illustrations of labels and nutrients served to enhance the understanding.

The inclusion of breast feeding was quite valuable.

Could have used a section on weight control and height-weight grids.

Appearance: Very attractive. Mothers seemed to enjoy the illustrations which caught their eyes and attracted their attention.

Use: The project was tested in both group and individual settings and was handy in size, short, and to the point.

Response of Parents: Very good. Some even enjoyed flipping through the pages on their own. Most remarked that they learned from it.

VITA

Elizabeth Ann Bailey was born in Oak Ridge, Tennessee, on May 20, 1952. She attended elementary schools in that city and graduated from Oak Ridge High School in 1970 as a member of the National Honor Society. During the same year, she entered The University of Tennessee and in December 1973, she received a Bachelor of Science degree in Nutrition.

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